

**TSG RAN Meeting #16**  
**Marco Island, FL, USA, 4 - 7 June 2002**

**RP-020279**

**Title** CRs (R'99 and Rel-4/Rel-5 Category A) to TS 25.101  
**Source** TSG RAN WG4  
**Agenda Item** 7.4.3

RAN4 Tdoc	Spec	Curr Ver	New Ver	CR	R	Cat	Ph	Title	Acronym
R4-020833	25.101	3.10.0	3.11.0	165		F	R99	Addition of a set of Compressed mode reference pattern 2 parameters for FDD-TDD test cases in 25.133	TEI
R4-020892	25.101	4.4.0	4.5.0	170		A	Rel-4	Addition of a set of Compressed mode reference pattern 2 parameters for FDD-TDD test cases in 25.133	TEI
R4-020893	25.101	5.2.0	5.3.0	171		A	Rel-5	Addition of a set of Compressed mode reference pattern 2 parameters for FDD-TDD test cases in 25.133	TEI
R4-020960	25.101	3.10.0	3.11.0	167	1	F	R99	Control and monitoring function of UE requirement	TEI
R4-020961	25.101	4.4.0	4.5.0	168	1	A	Rel-4	Control and monitoring function of UE requirement	TEI
R4-020962	25.101	5.2.0	5.3.0	169	1	A	Rel-5	Control and monitoring function of UE requirement	TEI
R4-021025	25.101	3.10.0	3.11.0	178		F	R99	Compressed mode performance requirements	TEI
R4-021026	25.101	4.4.0	4.5.0	179		A	Rel-4	Compressed mode performance requirements	TEI
R4-021027	25.101	5.2.0	5.3.0	180		A	Rel-5	Compressed mode performance requirements	TEI

CR-Form-v4

## CHANGE REQUEST

⌘ **25.101 CR** **165** ⌘ ev ⌘ Current version: **3.10.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

**Title:** ⌘ Addition of a set of Compressed mode reference pattern 2 parameters for FDD-TDD test cases in 25.133

**Source:** ⌘ RAN WG4

**Work item code:** ⌘ TEI **Date:** ⌘ 17/5/2002

**Category:** ⌘ **F** **Release:** ⌘ R99

Use one of the following categories:

<b>F</b> (correction)	<b>2</b> (GSM Phase 2)
<b>A</b> (corresponds to a correction in an earlier release)	<b>R96</b> (Release 1996)
<b>B</b> (addition of feature),	<b>R97</b> (Release 1997)
<b>C</b> (functional modification of feature)	<b>R98</b> (Release 1998)
<b>D</b> (editorial modification)	<b>R99</b> (Release 1999)
	<b>REL-4</b> (Release 4)
	<b>REL-5</b> (Release 5)

Detailed explanations of the above categories can be found in 3GPP [TR 21.900](#).

**Reason for change:** ⌘ The existing compressed mode reference pattern sets currently provided A.5 for test cases in 25.133 do not include a pattern set compatible with the required transmission gap length for TDD cell measurements. In order to properly test TDD cell measurement capability a compatible reference pattern set must be defined, since only defined pattern sets may be used for test cases in 25.133.

**Summary of change:** ⌘ A compressed mode reference pattern set compatible with TDD cell measurement requirements is defined.

**Consequences if not approved:** ⌘ FDD-TDD test cases in 25.133 will not have a usable compressed mode reference pattern set defined, and will therefore not be valid.

Isolated impact analysis:

This CR provides a compressed mode reference pattern set for FDD-TDD test cases in 25.133, allowing for the correction and completion of these test cases in 25.133. The addition of this reference pattern set does not affect previous implementations or functionality.

**Clauses affected:** ⌘ A.5

**Other specs affected:** ⌘  Other core specifications ⌘  Test specifications  O&M Specifications

**Other comments:** ⌘ This CR is required by CR R4-020840 which corrects FDD-TDD test cases in 25.133. Equivalent CRs in other Releases: CR170 cat. A to 25.101 v4.4.0, CR171 cat. A to 25.101 v5.2.0

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## A.5 DL reference compressed mode parameters

Parameters described in Table A.21 are used in some test specified in TS 25.101 while parameters described in Table A.22 are used in some tests specified in TS 25.133.

Set 1 parameters in Table A.21 are applicable when compressed mode by spreading factor reduction is used in downlink. Set 2 parameters in Table A.21 are applicable when compressed mode by puncturing is used in downlink.

**Table A.21: Compressed mode reference pattern 1 parameters**

Parameter	Set 1	Set 2	Note
TGSN (Transmission Gap Starting Slot Number)	11	11	
TGL1 (Transmission Gap Length 1)	7	7	
TGL2 (Transmission Gap Length 2)	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	Only one gap in use.
TGPL1 (Transmission Gap Pattern Length)	4	4	
TGPL2 (Transmission Gap Pattern Length)	-	-	Only one pattern in use.
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	2 configurations possible DL &UL / DL
UL compressed mode method	SF/2	SF/2	
DL compressed mode method	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11A	
Scrambling code change	No	No	
RPP (Recovery period power control mode)	0	0	
ITP (Initial transmission power control mode)	0	0	

**Table A.22: Compressed mode reference pattern 2 parameters**

Parameter	Set 1	Set 2	Set 3	Note
TGSN (Transmission Gap Starting Slot Number)	4	4	<u>10</u>	
TGL1 (Transmission Gap Length 1)	7	7	<u>10</u>	
TGL2 (Transmission Gap Length 2)	-	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	<u>0</u>	
TGPL1 (Transmission Gap Pattern Length)	3	12	<u>11</u>	
TGPL2 (Transmission Gap Pattern Length)	-	-	-	Only one pattern in use.
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	<u>NA</u>	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	<u>NA</u>	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	<u>DL &amp; UL</u>	2 configurations possible. DL & UL / DL
UL compressed mode method	SF/2	SF/2	<u>SF/2</u>	
DL compressed mode method	SF/2	SF/2	<u>Puncturing</u>	
Downlink frame type and Slot format	11B	11B	<u>11A</u>	
Scrambling code change	No	No	<u>No</u>	
RPP (Recovery period power control mode)	0	0	<u>0</u>	
ITP (Initial transmission power control mode)	0	0	<u>0</u>	

CR-Form-v4

## CHANGE REQUEST

⌘ **25.101 CR 167** ⌘ ev **1** ⌘ Current version: **3.10.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ UE control and monitoring functions		
<b>Source:</b>	⌘ RAN WG4		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 17/5/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

<b>Reason for change:</b>	⌘ A general requirement is missing that prevents the UE from transmitting when no acceptable cell can be found. This is requested by 3GPP PCG.
<b>Summary of change:</b>	⌘ General requirement on control and monitoring functions added
<b>Consequences if not approved:</b>	⌘ 3GPP PCG demand will not be reflected. <u>Isolated impact statement:</u> Addition of a requirement that was missing in the specification.

<b>Clauses affected:</b>	⌘ 4.3 (new), 4.3.1(new)		
<b>Other specs Affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input checked="" type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> O&M Specifications	⌘ 34.121	
<b>Other comments:</b>	⌘ Equivalent CRs in other Releases: CR168r1 cat. A to 25.101 v4.4.0, CR169r1 cat. A to 25.101 v5.2.0		

**How to create CRs using this form:**

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 4.3 Control and monitoring functions

This requirement verifies that the control and monitoring functions of the UE prevent it from transmitting if no acceptable cell can be found by the UE.

### 4.3.1 Minimum requirement

The power of the UE, as measured -with a thermal detector, shall not exceed -30dBm if no acceptable cell can be found by the UE.

CR-Form-v4

## CHANGE REQUEST

⌘ **25.101 CR 168** ⌘ ev **1** ⌘ Current version: **4.4.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ UE control and monitoring functions		
<b>Source:</b>	⌘ RAN WG4		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 17/5/2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2	(GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96	(Release 1996)
	B (addition of feature),	R97	(Release 1997)
	C (functional modification of feature)	R98	(Release 1998)
	D (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	REL-4	(Release 4)
		REL-5	(Release 5)

<b>Reason for change:</b>	⌘ A general requirement is missing that prevents the UE from transmitting when no acceptable cell can be found. This is requested by 3GPP PCG.
<b>Summary of change:</b>	⌘ General requirement on control and monitoring functions added
<b>Consequences if not approved:</b>	⌘ 3GPP PCG demand will not be reflected. <u>Isolated impact statement:</u> Addition of a requirement that was missing in the specification.

<b>Clauses affected:</b>	⌘ 4.3 (new), 4.3.1(new)	
<b>Other specs Affected:</b>	⌘ <input type="checkbox"/> Other core specifications	⌘ 34.121
	<input checked="" type="checkbox"/> Test specifications	
	<input type="checkbox"/> O&M Specifications	
<b>Other comments:</b>	⌘ Equivalent CRs in other Releases: CR167r1 cat. F to 25.101 v3.10.0, CR169r1 cat. A to 25.101 v5.2.0	

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 4.3 Control and monitoring functions

This requirement verifies that the control and monitoring functions of the UE prevent it from transmitting if no acceptable cell can be found by the UE.

### 4.3.1 Minimum requirement

The power of the UE, as measured -with a thermal detector, shall not exceed -30dBm if no acceptable cell can be found by the UE.

CR-Form-v4

## CHANGE REQUEST

⌘ **25.101 CR 169** ⌘ ev **1** ⌘ Current version: **5.2.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ UE control and monitoring functions		
<b>Source:</b>	⌘ RAN WG4		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 17/5/2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel-5
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ A general requirement is missing that prevents the UE from transmitting when no acceptable cell can be found. This is requested by 3GPP PCG.
<b>Summary of change:</b>	⌘ General requirement on control and monitoring functions added
<b>Consequences if not approved:</b>	⌘ 3GPP PCG demand will not be reflected. <u>Isolated impact statement:</u> Addition of a requirement that was missing in the specification.

<b>Clauses affected:</b>	⌘ 4.3 (new), 4.3.1(new)		
<b>Other specs Affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input checked="" type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> O&M Specifications		⌘ 34.121
<b>Other comments:</b>	⌘ Equivalent CRs in other Releases: CR167r1 cat. F to 25.101 v3.10.0, CR168r1 cat. A to 25.101 v4.4.0		

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 4.3 Control and monitoring functions

This requirement verifies that the control and monitoring functions of the UE prevent it from transmitting if no acceptable cell can be found by the UE.

### 4.3.1 Minimum requirement

The power of the UE, as measured -with a thermal detector, shall not exceed -30dBm if no acceptable cell can be found by the UE.

## CHANGE REQUEST

⌘ **25.101 CR** **170** ⌘ ev ⌘ Current version: **4.4.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

**Title:** ⌘ Addition of a set of Compressed mode reference pattern 2 parameters for FDD-TDD test cases in 25.133

**Source:** ⌘ RAN WG4

**Work item code:** ⌘ TEI **Date:** ⌘ 17/5/2002

<p><b>Category:</b> ⌘ <b>A</b></p> <p>Use <u>one</u> of the following categories:</p> <ul style="list-style-type: none"> <li><b>F</b> (correction)</li> <li><b>A</b> (corresponds to a correction in an earlier release)</li> <li><b>B</b> (addition of feature),</li> <li><b>C</b> (functional modification of feature)</li> <li><b>D</b> (editorial modification)</li> </ul> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>	<p><b>Release:</b> ⌘ <b>Rel-4</b></p> <p>Use <u>one</u> of the following releases:</p> <ul style="list-style-type: none"> <li><b>2</b> (GSM Phase 2)</li> <li><b>R96</b> (Release 1996)</li> <li><b>R97</b> (Release 1997)</li> <li><b>R98</b> (Release 1998)</li> <li><b>R99</b> (Release 1999)</li> <li><b>REL-4</b> (Release 4)</li> <li><b>REL-5</b> (Release 5)</li> </ul>
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**Reason for change:** ⌘ The existing compressed mode reference pattern sets currently provided A.5 for test cases in 25.133 do not include a pattern set compatible with the required transmission gap length for TDD cell measurements. In order to properly test TDD cell measurement capability a compatible reference pattern set must be defined, since only defined pattern sets may be used for test cases in 25.133.

**Summary of change:** ⌘ A compressed mode reference pattern set compatible with TDD cell measurement requirements is defined.

**Consequences if not approved:** ⌘ FDD-TDD test cases in 25.133 will not have a usable compressed mode reference pattern set defined, and will therefore not be valid.

Isolated impact analysis:

This CR provides a compressed mode reference pattern set for FDD-TDD test cases in 25.133, allowing for the correction and completion of these test cases in 25.133. The addition of this reference pattern set does not affect previous implementations or functionality.

**Clauses affected:** ⌘ A.5

**Other specs affected:** ⌘  Other core specifications ⌘  Test specifications  O&M Specifications

**Other comments:** ⌘ This CR is required by CR R4-02914 which corrects FDD-TDD test cases in 25.133.  
 Equivalent CRs in other Releases: CR165 cat. F to 25.101 v3.10.0, CR171 cat. A to 25.101 v5.2.0

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## A.5 DL reference compressed mode parameters

Parameters described in Table A.21 are used in some test specified in TS 25.101 while parameters described in Table A.22 are used in some tests specified in TS 25.133.

Set 1 parameters in Table A.21 are applicable when compressed mode by spreading factor reduction is used in downlink. Set 2 parameters in Table A.21 are applicable when compressed mode by puncturing is used in downlink.

**Table A.21: Compressed mode reference pattern 1 parameters**

Parameter	Set 1	Set 2	Note
TGSN (Transmission Gap Starting Slot Number)	11	11	
TGL1 (Transmission Gap Length 1)	7	7	
TGL2 (Transmission Gap Length 2)	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	Only one gap in use.
TGPL1 (Transmission Gap Pattern Length)	4	4	
TGPL2 (Transmission Gap Pattern Length)	-	-	Only one pattern in use.
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	2 configurations possible DL &UL / DL
UL compressed mode method	SF/2	SF/2	
DL compressed mode method	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11A	
Scrambling code change	No	No	
RPP (Recovery period power control mode)	0	0	
ITP (Initial transmission power control mode)	0	0	

**Table A.22: Compressed mode reference pattern 2 parameters**

Parameter	Set 1	Set 2	Set 3	Note
TGSN (Transmission Gap Starting Slot Number)	4	4	<u>10</u>	
TGL1 (Transmission Gap Length 1)	7	7	<u>10</u>	
TGL2 (Transmission Gap Length 2)	-	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	<u>0</u>	
TGPL1 (Transmission Gap Pattern Length)	3	12	<u>11</u>	
TGPL2 (Transmission Gap Pattern Length)	-	-	-	Only one pattern in use.
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	<u>NA</u>	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	<u>NA</u>	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	<u>DL &amp; UL</u>	2 configurations possible. DL & UL / DL
UL compressed mode method	SF/2	SF/2	<u>SF/2</u>	
DL compressed mode method	SF/2	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11B	<u>11A</u>	
Scrambling code change	No	No	<u>No</u>	
RPP (Recovery period power control mode)	0	0	<u>0</u>	
ITP (Initial transmission power control mode)	0	0	<u>0</u>	



CR-Form-v4

## CHANGE REQUEST

⌘ **25.101 CR 171** ⌘ ev ⌘ Current version: **5.2.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘	Addition of a set of Compressed mode reference pattern 2 parameters for FDD-TDD test cases in 25.133	
<b>Source:</b>	⌘	RAN WG4	
<b>Work item code:</b>	⌘	TEI	<b>Date:</b> ⌘ 17/5/2002
<b>Category:</b>	⌘	<b>A</b>	<b>Release:</b> ⌘ Rel-5
		Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

<b>Reason for change:</b>	⌘	The existing compressed mode reference pattern sets currently provided A.5 for test cases in 25.133 do not include a pattern set compatible with the required transmission gap length for TDD cell measurements. In order to properly test TDD cell measurement capability a compatible reference pattern set must be defined, since only defined pattern sets may be used for test cases in 25.133.
<b>Summary of change:</b>	⌘	A compressed mode reference pattern set compatible with TDD cell measurement requirements is defined.
<b>Consequences if not approved:</b>	⌘	FDD-TDD test cases in 25.133 will not have a usable compressed mode reference pattern set defined, and will therefore not be valid.  <u>Isolated impact analysis:</u>  This CR provides a compressed mode reference pattern set for FDD-TDD test cases in 25.133, allowing for the correction and completion of these test cases in 25.133. The addition of this reference pattern set does not affect previous implementations or functionality.

<b>Clauses affected:</b>	⌘	A.5
<b>Other specs affected:</b>	⌘	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
<b>Other comments:</b>	⌘	This CR is required by CR R4-02915 which corrects FDD-TDD test cases in 25.133. Equivalent CRs in other Releases: CR165 cat. F to 25.101 v3.10.0, CR170 cat. A to 25.101 v4.4.0

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- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## A.5 DL reference compressed mode parameters

Parameters described in Table A.21 are used in some test specified in TS 25.101 while parameters described in Table A.22 are used in some tests specified in TS 25.133.

Set 1 parameters in Table A.21 are applicable when compressed mode by spreading factor reduction is used in downlink. Set 2 parameters in Table A.21 are applicable when compressed mode by puncturing is used in downlink.

**Table A.21: Compressed mode reference pattern 1 parameters**

Parameter	Set 1	Set 2	Note
TGSN (Transmission Gap Starting Slot Number)	11	11	
TGL1 (Transmission Gap Length 1)	7	7	
TGL2 (Transmission Gap Length 2)	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	Only one gap in use.
TGPL1 (Transmission Gap Pattern Length)	4	4	
TGPL2 (Transmission Gap Pattern Length)	-	-	Only one pattern in use.
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	2 configurations possible DL &UL / DL
UL compressed mode method	SF/2	SF/2	
DL compressed mode method	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11A	
Scrambling code change	No	No	
RPP (Recovery period power control mode)	0	0	
ITP (Initial transmission power control mode)	0	0	

**Table A.22: Compressed mode reference pattern 2 parameters**

Parameter	Set 1	Set 2	Set 3	Note
TGSN (Transmission Gap Starting Slot Number)	4	4	<u>10</u>	
TGL1 (Transmission Gap Length 1)	7	7	<u>10</u>	
TGL2 (Transmission Gap Length 2)	-	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	<u>0</u>	
TGPL1 (Transmission Gap Pattern Length)	3	12	<u>11</u>	
TGPL2 (Transmission Gap Pattern Length)	-	-	-	Only one pattern in use.
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	<u>NA</u>	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	<u>NA</u>	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	<u>DL &amp; UL</u>	2 configurations possible. DL & UL / DL
UL compressed mode method	SF/2	SF/2	<u>SF/2</u>	
DL compressed mode method	SF/2	SF/2	<u>Puncturing</u>	
Downlink frame type and Slot format	11B	11B	<u>11A</u>	
Scrambling code change	No	No	<u>No</u>	
RPP (Recovery period power control mode)	0	0	<u>0</u>	
ITP (Initial transmission power control mode)	0	0	<u>0</u>	

## CHANGE REQUEST

⌘ **25.101 CR 178** ⌘ ev **-** ⌘ Current version: **3.10.0** ⌘

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**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of Compressed Mode Performance Requirement		
<b>Source:</b>	⌘ RAN WG4		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 17/5/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The implementation margin of the compressed mode SF/2 method requirement is smaller than puncturing method. The implementation margin should be considered as absolute value i.e. 2.5dB as same as the margin for other Case 2 tests.
<b>Summary of change:</b>	⌘ A new result is combined with previous one. Furthermore, the implementation margin is changed to 2.5 dB from 1.8 dB for the SF/2 method of compressed mode. As a result the figure of the requirement is changed to -14.6dB from -15.4dB for SF/2 method and to -15.2dB from -15.4dB for puncturing method. .  <u>Isolated Impact Analysis:</u>  Correction to the requirement would not affect implementations behaving according to current specification.  This correction would affect to the performance requirement of Downlink compressed mode test described in table 7.9.2 of TS34.121. But it would not affect any test procedures in the test specification.
<b>Consequences if not approved:</b>	⌘ It is hard for UE to achieve the requirement of compressed mode.

<b>Clauses affected:</b>	⌘ 8.9.1.1	
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input checked="" type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> O&M Specifications	⌘ 34.121 section 7.9
<b>Other comments:</b>	⌘ Equivalent CRs in other Releases: CR179 cat. A to 25.101 v4.4.0, CR180 cat. A to 25.101 v5.2.0	

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

**Table 8.33: Test parameter for downlink power control, wind-up effects**

Parameter	Unit	Test 1		
		Stage 1	Stage 2	Stage 3
Time in each stage	s	>15	5	0.5
$\hat{I}_{or}/I_{oc}$	dB	5		
$I_{oc}$	dBm/3.84 MHz	-60		
Information Data Rate	kbps	12.2		
Quality target on DTCH	BLER	0.01		
Propagation condition		Case 4		
Maximum_DL_Power	dB	7	-6.2	7
Minimum_DL_Power	dB	-18		
DL Power Control step size, $\Delta_{TPC}$	dB	1		
Limited Power Increase	-	"Not used"		

**Table 8.34: Requirements in downlink power control, wind-up effects**

Parameter	Unit	Test 1, stage 3
$\frac{DPCH\_E_c}{I_{or}}$	dB	-13.3

## 8.9 Downlink compressed mode

Downlink compressed mode is used to create gaps in the downlink transmission, to allow the UE to make measurements on other frequencies.

### 8.9.1 Single link performance

The receiver single link performance of the Dedicated Traffic Channel (DCH) in compressed mode is determined by the Block Error Ratio (BLER) and transmitted  $DPCH\_E_c/I_{or}$  power ratio in the downlink.

The compressed mode parameters are given in clause A.5. Tests 1 and 2 are using Set 1 compressed mode pattern parameters from Table A.21 in clause A.5 while tests 3 and 4 are using Set 2 compressed mode patterns from the same table.

#### 8.9.1.1 Minimum requirements

For the parameters specified in Table 8.35 the downlink  $\frac{DPCH\_E_c}{I_{or}}$  power ratio measured values, which are averaged over one slot, shall be below the specified value in Table 8.36 more than 90% of the time. The measured quality on DTCH shall be as required in Table 8.36.

Downlink power control is ON during the test. Uplink TPC commands shall be error free. System simulator shall increase the transmitted power during compressed frames by the same amount that UE is expected to increase its SIR target during those frames.

Table 8.35: Test parameter for downlink compressed mode

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Delta SIR1	dB	0	3	0	3
Delta SIR after1	dB	0	3	0	3
Delta SIR2	dB	0	0	0	0
Delta SIR after2	dB	0	0	0	0
$\hat{I}_{or}/I_{oc}$	dB	9			
$I_{oc}$	dBm/3.84 MHz	-60			
Information Data Rate	kbps	12.2			
Propagation condition		Case 2			
Target quality value on DTCH	BLER	0.01			
Maximum_DL_Power	dB	7			
Minimum_DL_Power	dB	-18			
DL Power Control step size, $\Delta_{TPC}$	dB	1			
Limited Power Increase	-	"Not used"			

Table 8.36: Requirements in downlink compressed mode

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
$\frac{DPCH\_E_c}{I_{or}}$	dB	<del>-15.4</del> -14.6	No requirements	<del>-15.4</del> -15.2	No requirements
Measured quality of compressed and recovery frames	BLER	No requirements	<0.001	No requirements	<0.001
Measured quality on DTCH	BLER	0.01 ± 30 %			

## 8.10 Blind transport format detection

Performance of Blind transport format detection is determined by the Block Error Ratio (BLER) values and by the measured average transmitted  $DPCH\_E_c/I_{or}$  value.

### 8.10.1 Minimum requirement

For the parameters specified in Table 8.37 the average downlink  $\frac{DPCH\_E_c}{I_{or}}$  power ratio shall be below the specified value for the BLER shown in Table 8.38.

Table 8.37: Test parameters for Blind transport format detection

Parameter	Unit	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
$\hat{I}_{or}/I_{oc}$	dB	-1			-3		
$I_{oc}$	dBm/3.84 MHz	-60					
Information Data Rate	kbps	12.2 (rate 1)	7.95 (rate 2)	1.95 (rate 3)	12.2 (rate 1)	7.95 (rate 2)	1.95 (rate 3)
propagation condition	-	static			multi-path fading case 3		
TFCI	-	off					

## CHANGE REQUEST

⌘ **25.101 CR 179** ⌘ ev **-** ⌘ Current version: **4.4.0** ⌘

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**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of Compressed Mode Performance Requirement		
<b>Source:</b>	⌘ RAN WG4		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 17/5/2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel-4
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The implementation margin of the compressed mode SF/2 method requirement is smaller than puncturing method. The implementation margin should be considered as absolute value i.e. 2.5dB as same as the margin for other Case 2 tests.
<b>Summary of change:</b>	⌘ A new result is combined with previous one. Furthermore, the implementation margin is changed to 2.5 dB from 1.8 dB for the SF/2 method of compressed mode. As a result the figure of the requirement is changed to -14.6dB from -15.4dB for SF/2 method and to -15.2dB from -15.4dB for puncturing method. .  <u>Isolated Impact Analysis:</u>  Correction to the requirement would not affect implementations behaving according to current specification.  This correction would affect to the performance requirement of Downlink compressed mode test described in table 7.9.2 of TS34.121. But it would not affect any test procedures in the test specification.
<b>Consequences if not approved:</b>	⌘ It is hard for UE to achieve the requirement of compressed mode.

<b>Clauses affected:</b>	⌘ 8.9.1.1		
<b>Other specs affected:</b>	<input type="checkbox"/> Other core specifications <input checked="" type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	34.121 section 7.9
<b>Other comments:</b>	⌘ Equivalent CRs in other Releases: CR178 cat. F to 25.101 v3.10.0, CR180 cat. A to 25.101 v5.2.0		

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**Table 8.33: Test parameter for downlink power control, wind-up effects**

Parameter	Unit	Test 1		
		Stage 1	Stage 2	Stage 3
Time in each stage	s	>15	5	0.5
$\hat{I}_{or}/I_{oc}$	dB	5		
$I_{oc}$	dBm/3.84 MHz	-60		
Information Data Rate	kbps	12.2		
Quality target on DTCH	BLER	0.01		
Propagation condition		Case 4		
Maximum_DL_Power	dB	7	-6.2	7
Minimum_DL_Power	dB	-18		
DL Power Control step size, $\Delta_{TPC}$	dB	1		
Limited Power Increase	-	"Not used"		

**Table 8.34: Requirements in downlink power control, wind-up effects**

Parameter	Unit	Test 1, stage 3
$\frac{DPCH\_E_c}{I_{or}}$	dB	-13.3

## 8.9 Downlink compressed mode

Downlink compressed mode is used to create gaps in the downlink transmission, to allow the UE to make measurements on other frequencies.

### 8.9.1 Single link performance

The receiver single link performance of the Dedicated Traffic Channel (DCH) in compressed mode is determined by the Block Error Ratio (BLER) and transmitted  $DPCH\_E_c/I_{or}$  power ratio in the downlink.

The compressed mode parameters are given in clause A.5. Tests 1 and 2 are using Set 1 compressed mode pattern parameters from Table A.21 in clause A.5 while tests 3 and 4 are using Set 2 compressed mode patterns from the same table.

#### 8.9.1.1 Minimum requirements

For the parameters specified in Table 8.35 the downlink  $\frac{DPCH\_E_c}{I_{or}}$  power ratio measured values, which are averaged over one slot, shall be below the specified value in Table 8.36 more than 90% of the time. The measured quality on DTCH shall be as required in Table 8.36.

Downlink power control is ON during the test. Uplink TPC commands shall be error free. System simulator shall increase the transmitted power during compressed frames by the same amount that UE is expected to increase its SIR target during those frames.

Table 8.35: Test parameter for downlink compressed mode

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Delta SIR1	dB	0	3	0	3
Delta SIR after1	dB	0	3	0	3
Delta SIR2	dB	0	0	0	0
Delta SIR after2	dB	0	0	0	0
$\hat{I}_{or}/I_{oc}$	dB	9			
$I_{oc}$	dBm/3.84 MHz	-60			
Information Data Rate	kbps	12.2			
Propagation condition		Case 2			
Target quality value on DTCH	BLER	0.01			
Maximum_DL_Power	dB	7			
Minimum_DL_Power	dB	-18			
DL Power Control step size, $\Delta_{TPC}$	dB	1			
Limited Power Increase	-	"Not used"			

Table 8.36: Requirements in downlink compressed mode

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
$\frac{DPCH\_E_c}{I_{or}}$	dB	<del>-15.4</del> -14.6	No requirements	<del>-15.4</del> -15.2	No requirements
Measured quality of compressed and recovery frames	BLER	No requirements	<0.001	No requirements	<0.001
Measured quality on DTCH	BLER	0.01 ± 30 %			

## 8.10 Blind transport format detection

Performance of Blind transport format detection is determined by the Block Error Ratio (BLER) values and by the measured average transmitted  $DPCH\_E_c/I_{or}$  value.

### 8.10.1 Minimum requirement

For the parameters specified in Table 8.37 the average downlink  $\frac{DPCH\_E_c}{I_{or}}$  power ratio shall be below the specified value for the BLER shown in Table 8.38.

Table 8.37: Test parameters for Blind transport format detection

Parameter	Unit	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
$\hat{I}_{or}/I_{oc}$	dB	-1			-3		
$I_{oc}$	dBm/3.84 MHz	-60					
Information Data Rate	kbps	12.2 (rate 1)	7.95 (rate 2)	1.95 (rate 3)	12.2 (rate 1)	7.95 (rate 2)	1.95 (rate 3)
propagation condition	-	static			multi-path fading case 3		
TFCI	-	off					

## CHANGE REQUEST

⌘ **25.101 CR 180** ⌘ ev **-** ⌘ Current version: **5.2.0** ⌘

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**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of Compressed Mode Performance Requirement		
<b>Source:</b>	⌘ RAN WG4		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 17/5/2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel-5
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The implementation margin of the compressed mode SF/2 method requirement is smaller than puncturing method. The implementation margin should be considered as absolute value i.e. 2.5dB as same as the margin for other Case 2 tests.
<b>Summary of change:</b>	⌘ A new result is combined with previous one. Furthermore, the implementation margin is changed to 2.5 dB from 1.8 dB for the SF/2 method of compressed mode. As a result the figure of the requirement is changed to -14.6dB from -15.4dB for SF/2 method and to -15.2dB from -15.4dB for puncturing method. .  <u>Isolated Impact Analysis:</u>  Correction to the requirement would not affect implementations behaving according to current specification.  This correction would affect to the performance requirement of Downlink compressed mode test described in table 7.9.2 of TS34.121. But it would not affect any test procedures in the test specification.
<b>Consequences if not approved:</b>	⌘ It is hard for UE to achieve the requirement of compressed mode.

<b>Clauses affected:</b>	⌘ 8.9.1.1		
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input checked="" type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> O&M Specifications	⌘ 34.121 section 7.9	
<b>Other comments:</b>	⌘ Equivalent CRs in other Releases: CR178 cat. F to 25.101 v3.10.0, CR179 cat. A to 25.101 v4.4.0		

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Table 8.33: Test parameter for downlink power control, wind-up effects

Parameter	Unit	Test 1		
		Stage 1	Stage 2	Stage 3
Time in each stage	s	>15	5	0.5
$\hat{I}_{or}/I_{oc}$	dB	5		
$I_{oc}$	dBm/3.84 MHz	-60		
Information Data Rate	kbps	12.2		
Quality target on DTCH	BLER	0.01		
Propagation condition		Case 4		
Maximum_DL_Power	dB	7	-6.2	7
Minimum_DL_Power	dB	-18		
DL Power Control step size, $\Delta_{TPC}$	dB	1		
Limited Power Increase	-	"Not used"		

Table 8.34: Requirements in downlink power control, wind-up effects

Parameter	Unit	Test 1, stage 3
$\frac{DPCH\_E_c}{I_{or}}$	dB	-13.3

## 8.9 Downlink compressed mode

Downlink compressed mode is used to create gaps in the downlink transmission, to allow the UE to make measurements on other frequencies.

### 8.9.1 Single link performance

The receiver single link performance of the Dedicated Traffic Channel (DCH) in compressed mode is determined by the Block Error Ratio (BLER) and transmitted  $DPCH\_E_c/I_{or}$  power ratio in the downlink.

The compressed mode parameters are given in clause A.5. Tests 1 and 2 are using Set 1 compressed mode pattern parameters from Table A.21 in clause A.5 while tests 3 and 4 are using Set 2 compressed mode patterns from the same table.

#### 8.9.1.1 Minimum requirements

For the parameters specified in Table 8.35 the downlink  $\frac{DPCH\_E_c}{I_{or}}$  power ratio measured values, which are averaged over one slot, shall be below the specified value in Table 8.36 more than 90% of the time. The measured quality on DTCH shall be as required in Table 8.36.

Downlink power control is ON during the test. Uplink TPC commands shall be error free. System simulator shall increase the transmitted power during compressed frames by the same amount that UE is expected to increase its SIR target during those frames.

Table 8.35: Test parameter for downlink compressed mode

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Delta SIR1	dB	0	3	0	3
Delta SIR after1	dB	0	3	0	3
Delta SIR2	dB	0	0	0	0
Delta SIR after2	dB	0	0	0	0
$\hat{I}_{or}/I_{oc}$	dB	9			
$I_{oc}$	dBm/3.84 MHz	-60			
Information Data Rate	kbps	12.2			
Propagation condition		Case 2			
Target quality value on DTCH	BLER	0.01			
Maximum_DL_Power	dB	7			
Minimum_DL_Power	dB	-18			
DL Power Control step size, $\Delta_{TPC}$	dB	1			
Limited Power Increase	-	"Not used"			

Table 8.36: Requirements in downlink compressed mode

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
$\frac{DPCH\_E_c}{I_{or}}$	dB	<del>-15.4</del> -14.6	No requirements	<del>-15.4</del> -15.2	No requirements
Measured quality of compressed and recovery frames	BLER	No requirements	<0.001	No requirements	<0.001
Measured quality on DTCH	BLER	0.01 ± 30 %			

## 8.10 Blind transport format detection

Performance of Blind transport format detection is determined by the Block Error Ratio (BLER) values and by the measured average transmitted  $DPCH\_E_c/I_{or}$  value.

### 8.10.1 Minimum requirement

For the parameters specified in Table 8.37 the average downlink  $\frac{DPCH\_E_c}{I_{or}}$  power ratio shall be below the specified value for the BLER shown in Table 8.38.

Table 8.37: Test parameters for Blind transport format detection

Parameter	Unit	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
$\hat{I}_{or}/I_{oc}$	dB	-1			-3		
$I_{oc}$	dBm/3.84 MHz	-60					
Information Data Rate	kbps	12.2 (rate 1)	7.95 (rate 2)	1.95 (rate 3)	12.2 (rate 1)	7.95 (rate 2)	1.95 (rate 3)
propagation condition	-	static			multi-path fading case 3		
TFCI	-	off					